

REMARKS

Claims 1-4, 7-11, 14 and 20 stand rejected under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,746,468 to Sepetka et al. Claims 1, 6-8, 13, 14 and 20 stand rejected under 35 USC 102(b) as being anticipated by U.S. Patent No. 6,146,396 to Konya et al. Claims 1-4, 7, 8, 10, 11, 14-17, and 20-23 stand rejected under 35 USC 102(b) as being anticipated by U.S. Patent No. 4,710,192 to Liotta et al. Claims 1-3, 5, 7, 10, 12, 14-18, and 20-24 stand rejected under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,638,293 to Makower et al. Claims 5 and 12 stand rejected under 35 USC 103 as being unpatentable over Makower et al. Applicant respectfully disagrees with the Examiner's analysis. However, in order to advance prosecution, Applicant has amended independent claims 1 and 7 to further define the invention over the cited prior art. Applicant hereby reserves the right to pursue the subject matter claimed herein in a continuation application. Applicant respectfully submits that the cited prior art references fail to teach or suggest important features of the claims as presented herein.

More particularly, there are significant structural differences between the claimed plug and the cited prior art devices. First, the claimed plug includes a **large diameter section with a cross-sectional diameter greater than the interior diameter of the lumen of the inner wall of the blood vessel**. Second, the claimed plug is **sufficiently rigid in order to resist compressive forces applied thereto by the inner wall of the blood vessel**. These structural features allow the plug to be gripped by compressive forces exerted by the elastic nature of the inner wall of the blood vessel. In contrast, the

expandable devices of Sepetka, Makower, Liotta and Konya are all maintained at a smaller diameter than the lumen of the vessel through which it travels during positioning. After positioning is complete, the devices are expanded to a size that conforms to the size of the vascular structure at the deployment site. Thus, these expandable devices are never expanded to a cross-sectional diameter that is greater than the diameter of the vessel wall. Moreover, the very nature of their collapsible designs dictate that they lack the sufficient rigidity to resist compressive forces applied by the inner wall of the blood vessel. Thus, the cited prior art devices fail to teach or suggest important structural features of the claimed plug.

The cited prior art devices also fail to teach or suggest a **rigid plug in combination with a plurality of spokes that extend rearward from an interior chamber of the plug and radially outward toward the inner wall of the blood vessel** as claimed. Such combination ensures that the rigid plug is secured in position when gripped by the elastic walls of the blood vessel.

Finally, there are other significant differences between the plug of the present invention and the cited prior art. For example, some of the cited prior art devices are securely located in a different part of the vascular system than the claimed plug and/or the prior art devices perform different functions than the claimed plug. More particularly, the claimed plug is held in place within a vessel lumen, and operates to block the flow of blood through the vessel lumen. In contrast, the expandable device of Sepetka is inserted into an aneurysm. **The aneurysm is not part of the vessel lumen; it is an enlargement**

of the vessel that protrudes radially outward like a balloon from the wall of the vessel. Thus, the device of Sepetka does not occlude the flow of blood through the lumen of the blood vessel. It supports and reinforce the body and neck of the aneurysm wall.

Because of the significant differences outlined above with respect to the cited prior art and independent claims 1 and 7, Applicant respectfully submits that independent claims 1 and 7 as amended are patentable over the cited prior art.

Dependent claims 2, 3, 5, 6, 8, 10, 12, and 15-24 are patentable over the cited prior art for those reasons advanced above with respect to independent claims 1 and 7 from which they respectfully depend and for reciting additional features neither taught nor suggested by the cited prior art.

In light of all of the above, it is submitted that the claims are in order for allowance, and prompt allowance is earnestly requested. Should any issues remain outstanding, the Examiner is invited to call the undersigned attorney of record so that the case may proceed expeditiously to allowance.

Respectfully submitted,



Jay P. Sbrollini
Reg. No. 36,266
Attorney for Applicant(s)

GORDON & JACOBSON, P.C.
60 Long Ridge Road, Suite 407
Stamford, CT 06902
voice: (203) 323-1800

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